FIG. 1


```
     mryrasalgs   dgvrvtm*esa  ltardrvgvq   dfvllenfts
     eaafienlrr   rfrenliyty   igpvlvsvnp   yrdlqiysrq
 5   hmeryrgvsf   yevpphlfav   adtvyralrt   errdqavmis
     [gesgagkt]ea tkrllqfyae   tcpapergga   vrdrllqsnp
     vleafgnakt   lrndnssrfg   kymdvqfdfk   gapvgghils
     ylleksrvvh   qnhgernfhv   fyqlleggee   etlrrlgler
     npqsylylvk   gqcakvssin   dksdwkvmrk   alsvidfted
10   evedllsiva   svlhlgnihf   aadedsnaqv   ttenqlkylt
     rllgvegttl   realthrkii   akgeellspl   nleqaayard
     alakavysrt   ftwlvrkinr   slaskdaesp   swrsttvlgl
     ldiygfevfq   hnsfeqfcin   ycneklqqlf   ieltlkseqe
     eyeaegiawe   pvqyfnnkii   cdlveekfkg   iisildeecl
15   rpgeatdltf   lekledtvkp   hphflthkla   dqktrksldr
     gefrllhyag   evtysvtgfl   dknndllfrn   lketmcssmn
     pimaqcfdks   elsdkk rpet  vatqfkmsll   qlveilrske
     payircikpn   dakqpgrfde   vlirhqvkyl   glmenlrvrr
     agfayrrkye   aflqrykslc   petwpmwagr   pqdgvavlvr
20   hlgykpeeyk   mgrtkifirf   pktlfateds   levrrqslat
     kiqaawrgfh   wrqkflrvkr   saiciqswwr   gtlgrrkaakr
     kwaaqtirr    lirgfilrhs   pr cpenaffl  dhvrasflln
     lrrqlprnvl   dtswptpppa   lreasellrel  cmknmvwky
     crsispewkq   qlqqkavase   ifkgkkdnyp   qsvprlfist
25   rlgteeispr   vlqslgsepi   qyavpvvkyd   rkgykprprq
     llltpsavvi   vedakvkqri   dyanltgisv   sslsdslfvl
     hvqrednkqk   gdvvlqsdhv   ietltktals   adrvnninin
     qgsitfaggp   grdgiidfts   gsellitkak   nghlavvapr
     lnsr.
30
```

FIG. 2

```
    1   ggagcggggc gccgggtccg gcaggatgcg ctaccgggca tcggccctgg
        gcagtgacgg

   61   ggttcgagtg accatggaga gcgccttgac tgcccgagac cgggtagggg
        tgcaggactt

  121   tgtcctgctg gagaatttca ccagtgaggc tgccttcatt gagaacctcc
        ggcggcggtt

  181   ccgggagaac ctcatttata cctacatcgg tcctgtccta gtctctgtca
        atccctaccg

  241   agacctacag atctacagcc ggcagcatat ggaacgctac cgtggtgtca gtttctatga

  301   agtaccacct catttgtttg cagtggctga cactgtatac cgggcacttc gtactgagcg

  361   tcgggaccag gcagtgatga tttctggaga gagtggggca ggcaagacag aggccaccaa

  421   gagactgctc cagttctatg cagagacctg cccagcccct gaacggggtg gcgcagtgcg

  481   agaccgcctg ttgcagagca accccgtgtt agaggccttt gggaatgcca agactctccg

  541   caacgataac tccagccggt ttggaaagta catggatgtg cagtttgact tcaagggtgc

  601   ccccgtggga ggccacattc tcagttacct cctggaaaag tcccgggtgg tgcaccaaaa

  661   tcacggagag cggaacttcc acgtctttta ccagctactg gagggggggcg aggaggagac

  721   tctccgtcgg ctgggcttgg aacggaaccc ccagagctac ttgtacctgg tgaagggcca

  781   gtgtgccaag gtctcctcca tcaacgacaa gagtgactgg aaggttatga ggaaggcgct

  841   gtccgtcatt gacttcactg aggatgaagt ggaggacttg ctcagcatcg tggccagcgt

  901   cctacatctg ggcaacatcc actttgctgc tgacgaggac agcaatgccc aggttactac

  961   tgagaaccag ctcaaatatc tgaccaggct ccttggtgtg gaaggtacaa cacttaggga

 1021   agccctgacc cacaggaaga tcatcgccaa gggggaagag ctcctgagcc cactgaacct

 1081   tgaacaggcg gcatatgcaa gggatgcgct tgccaaggct gtgtacagcc ggacattcac

 1141   ctggctggtc agaaagatca ataggtcact ggcctctaag gacgctgaga gccccagctg

 1201   gcgaagcacc acggttcttg ggctcctgga catttacggc tttgaagtgt tcagcataa

 1261   cagcttcgag cagttctgca tcaactactg caatgagaag ctgcagcagc tcttcatcga

 1321   gctgactctc aagtcggagc aggaggaata cgaggctgag ggcatcgcgt gggaacctgt

 1381   ccagtacttc aacaacaaga tcatctgtga cctggtagag gagaagttca agggcatcat

 1441   ctccatcttg gatgaagagt gcctgcgtcc tggggaggcc acggacctga cctttctgga

 1501   gaagttggag gacactgtca gccccaccc tcacttcctg acgcacaagc tcgctgacca

 1561   gaagaccagg aaatccctag accgagggga gttccgcctt ctgcattatg ctggagaggt

 1621   gacctacagt gtgactgggt ttctggataa aaacaatgac ctcctcttcc ggaacctgaa

 1681   ggagaccatg tgcagctcaa tgaaccccat catggcccag tgctttgaca agagtgagct

 1741   cagtgacaag aagcggccag agacggtggc cacccagttc aagatgagcc tcctgcagct

 1801   cgtggagatc ctgaggtcta aggagcctgc ctatatccgg tgcatcaagc caaacgacgc
```

1861 caagcagccg ggtcgctttg atgaggtgct catccgacat caggtgaagt acctgggact

1921 gatggagaat ctgcgcgtgc gcagagctgg ctttgcctat cgtcgcaaat atgaggcttt

1981 cctgcagagg tacaagtcac tgtgcccaga gacatggccc atgtgggcag gacggcccca

2041 ggatggtgtg gccgtgttgg tcagacacct cggctacaag ccagaagagt acaaaatggg

5 2101 caggactaag atcttcatcc gattccccaa gaccttattt gccacagagg actccctgga

2161 agtccggcgg cagagtctag ccaccaagat ccaggcggcc tggagggggct ttcattggcg

2221 acagaaattt ctccgggtga agcgatcagc catctgtatc cagtcatggt ggcgtggcac

2281 actgggccgg aggaaggcag ccaagaggaa gtgggcagcc cagaccatcc gtcgactcat

2341 ccgtggcttc attttgcgcc attcacccccg gtgccctgag aatgccttct tcttggacca

10 2401 cgtgcgcgcc tcatttttgc ttaacctgag gcggcaactg ccccggaatg ttctggacac

2461 ctcctggccc acacccccac ctgccctgag agaggcctca gaactgctac gggaactgtg

2521 catgaagaac atggtgtgga agtactgccg gagcatcagc cctgagtgga agcagcagct

2581 gcagcaaaag gcggtggcta gtgaaatttt caagggcaag aaggacaact accccccagag

2641 tgtccccaga ctcttcatta gcacacggct tggcacagag gagatcagcc ccagagtgct

15 2701 tcaatccttg ggctctgaac ccatccagta tgccgtgccc gtggtaaaat

acgaccgtaa

2761 gggttacaag cctcgccccc ggcagctgct gctcacgccc agtgctgtgg tcattgtgga

2821 ggatgctaaa gtcaagcaga gaattgatta tgccaaccta accggaatct ctgtcagtag

2881 cctgagtgat agcctatttg tgcttcacgt gcagcgtgaa gacaacaagc agaagggaga

20 2941 tgtggtgctg cagagtgatc atgtgatcga gacactaacc aagacggccc tcagtgctga

3001 ccgcgtgaac aatatcaaca tcaaccaggg cagcataacg tttgcagggg gtccaggcag

3061 ggacggcatc attgacttca catcgggctc agagcttctc atcaccaagg ctaagaatgg

3121 ccacctggct gtggtggccc cacggctgaa ttctcggtga tgaaggctgc ggtggaccgc

3181 tcctgactcc tgatgcttcc cttagtcccc tcctcccctc cgacttacca aaaactcaag

25 3241 cttccaaaca gggatccatg gacaccctca aaacccacgc tgcaaactcc tgccttctgc

3301 tcgcccccctc ttgaggtgat caggagccag ggagctaccc catgagtggg ccaggccggg

3361 ccacaccaat agaaaagcag aggcctgagc aggccaggcc agccctctgc tgatgccaaa

3421 tatctaagac aagggaattt taactgaggt tttctctgag attttttgat gctttatagg

3481 aaactatttt tttaagaaag ccattttcct accctaaaca cactggatgt gttttttccct

30 3541 gcctcgaaca gggcaaggaa tgtaactgaa agactgactg ggctgggctg gaaggtcctc

3601 ttcttggcca acccttcctt attcccttgt ctgcctgtcc atccacctgc accttttagc

3661 cca

FIGURE 3

A

Start site for NMIβ
↓
M R Y R A S A L G S

AGCGGGGCGCCGGGTCCGGCAGG ATG CGC TAC CGG GCA TCG GCC CTG GGC AGT

Consensus MI start site
↓
D G V R V T *M* E S A L T A R

GAC GGG GTT CGA GTG ACC *ATG* GAG AGC GCC TTG ACT GCC CGA GAC CGG GTA

B

Vibrator mouse (9) and human (10) myosin I β

Normal mouse (10) myosin I β

Nuclear myosin I β

FIGURE 4